

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the above-identified application.

Listing of Claims

1. (Previously Presented) In a RAID data storage system comprising a stripe, wherein the stripe comprises stripe units $B_1 - B_{\max}$, a method comprising:
receiving a request to read data from stripe unit B_x , wherein B_x is one of stripe units $B_1 - B_{\max}$, wherein the request is received from a computer system in data communication with the RAID data storage system;
reading stripe parity P corresponding to stripe units $B_1 - B_{\max}$ in response to receiving the request;
generating new stripe parity P_{new} corresponding to stripe units $B_1 - B_{\max}$ as a function of data of each of the stripe units $B_1 - B_{\max}$;
comparing the new stripe parity P_{new} with the stripe parity P .
2. (Previously Presented) The method of claim 1 wherein the RAID data storage system comprises a parity RAID data storage system.
3. (Previously Presented) The method of claim 2 wherein the parity RAID data storage system comprises a RAID-5 data storage system.
4. (Previously Presented) The method of claim 1 further comprising returning stripe unit B_x data to the computer system if the stripe parity P compares equally to the new stripe parity P_{new} .

5. (Previously Presented) The method of claim 1 further comprising:
 if stripe parity P does not compare equally to new stripe parity P_{new} :
 reading checksum CS data from memory, wherein the checksum CS data
 corresponds to stripe units $B_1 - B_{\text{max}}$;
 (a) generating new data for stripe unit B_y , one of the stripe units $B_1 - B_{\text{max}}$ as a
 function of checksum CS data and data of stripe units $B_1 - B_{\text{max}}$ other than
 stripe unit B_y ;
 (b) generating new checksum CS_{new} data as a function of the new data for stripe
 unit B_y and data of stripe units $B_1 - B_{\text{max}}$ other than stripe unit B_y ;
 (c) comparing new checksum CS_{new} data with checksum CS data;
 (d) overwriting data of stripe unit B_y with the new data of stripe unit B_y if new
 checksum CS_{new} data compares equally to checksum CS data.
6. (Previously Presented) The method of claim 5 further comprising changing the value of
 variable y and repeating (a) – (d) if new checksum CS_{new} data does not compare equally with
 checksum CS data.
7. (Previously Presented) A computer readable medium storing instructions executable by a
 first computer system in a RAID data storage system, wherein the RAID data storage system
 comprises a stripe, wherein the stripe comprises stripe units $B_1 - B_{\text{max}}$, wherein the first
 computer system performs a method in response to executing instructions stored on the computer
 readable medium, the method comprising:
 reading stripe parity P corresponding to stripe units $B_1 - B_{\text{max}}$ in response to receiving a
 request to read data from stripe unit B_x , wherein B_x is one of $B_1 - B_{\text{max}}$, wherein
 the request is received from a second computer system in data communication
 with the first computer system;
 generating new stripe priority P_{new} corresponding to stripe units $B_1 - B_{\text{max}}$ as a function of
 data of each of the stripe units $B_1 - B_{\text{max}}$;
 comparing the new stripe parity P_{new} with the stripe parity P .

8. (Previously Presented) The computer readable medium of claim 7 wherein the RAID data storage system comprises a parity RAID data storage system.

9. (Previously Presented) The computer readable medium of claim 8 wherein the parity RAID data storage system comprises a RAID-5 data storage system.

10. (Currently Amended) The computer readable medium of claim 7 wherein the method further comprises returning stripe unit B_x data to the second computer system if the stripe parity P compares equally to the new stripe parity P_{new} .

11. (Previously Presented) The computer readable medium of claim 7, wherein the method further comprises:

if stripe parity P does not compare equally to new stripe parity P_{new} :

reading checksum CS data corresponding to stripe units $B_1 - B_{max}$;

(a) generating new data for B_y , one of the stripe units $B_1 - B_{max}$, as a function of checksum CS data and data of stripe units $B_1 - B_{max}$ other than stripe unit B_y ;

(b) generating new checksum CS_{new} data as a function of the new data for stripe unit B_y and data of stripe units $B_1 - B_{max}$ other than stripe unit B_y ;

(c) comparing new checksum CS_{new} data with checksum CS data;

(d) overwriting data of stripe unit B_y with the new data of stripe unit B_y if new checksum CS_{new} data compares equally to checksum CS data.

12. (Previously Presented) The computer readable medium of claim 11 wherein the method further comprises changing the value of y and repeating (a) – (d) if new checksum CS_{new} data does not compare equally with checksum CS data.

13. (Currently Amended) A data processing system comprising:
- a RAID data storage system comprising a stripe, wherein the stripe comprises stripe units $B_1 - B_{\max}$;
 - a first computer system for receiving a request to read data from stripe unit B_x , wherein B_x is one of $B_1 - B_{\max}$, wherein the request is received from a second computer system in data communication with the first computer system, wherein the first computer system comprises a computer readable medium that stores instructions executable by the first computer system, wherein the first computer system performs a method in response to executing the stored instructions, the method comprising;
 - reading stripe parity P corresponding to stripe units $B_1 - B_{\max}$ in response to receiving the request;
 - generating new stripe priority P_{new} corresponding to stripe units $B_1 - B_{\max}$ as a function of data of each of the stripe units $B_1 - B_{\max}$;
 - comparing the new stripe parity P_{new} with the stripe parity P ;
 - returning stripe unit B_x data to the second computer system if the stripe parity P compares equally to the new stripe parity P_{new} .

14. – 15. (Cancelled)

